

03 JAN 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/006076 A3

(51) International Patent Classification⁷: **G06F 1/00**

(74) Agents: **DANIELSON, Mark, J.** et al.; Pillsbury Winthrop LLP, 1600 Tysons Boulevard, McLean, VA 22102 (US).

(21) International Application Number:
PCT/US2003/020789

(22) International Filing Date: 1 July 2003 (01.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/393,606 3 July 2002 (03.07.2002) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): **AURORA WIRELESS TECHNOLOGIES, LTD.** [—/—]; 18F, No 1 Pao Sheng Road, Yung-Ho City, Taipei (TW).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

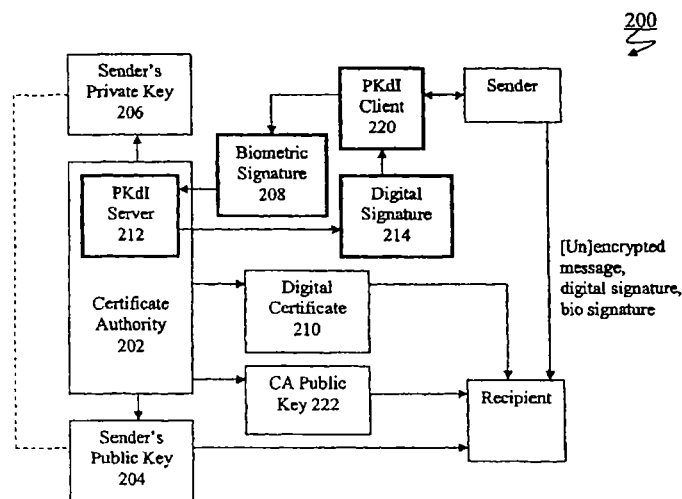
(75) Inventors/Applicants (*for US only*): **SOTO, Luz, Maria** [US/US]; 107 Tate Court, Orlando, FL 32828 (US). **HANKINSON, Michael, L.** [US/US]; 2186 Mt. Evans Boulevard, Pine, CO 80470 (US). **PIRKEY, Roger** [US/US]; 13405 Whitby Road, Hudson, FL 34667 (US).

Published:

— with international search report

[Continued on next page]

(54) Title: BIOMETRIC PRIVATE KEY INFRASTRUCTURE



162162

WO 2004/006076 A3

(57) Abstract: In accordance with an aspect of providing trust and authentication for network communications and transactions, a network infrastructure is provided that employs biometric private keys (BioPKI). Generally, BioPKI is a unique combination of two software solutions that validate electronic user authentication: a state-of-the-art biometric signature system, and a digital signature for data integrity. The combined solution allows networked businesses and merchants such as financial institutions to ensure that user authentication is conducted in a trusted, secure fashion within standard network environments. In one example implementation, a biometric signature augments standard digital signatures by adding an automated, non-reputable user authentication capability to the existing digital signature process. In contrast to simple verification in a pure biometric-based system or digital signature/certificate environment, BioPKI uses a combination of biometric technology to access private keys in order to create digital signatures based on biometric authentication and industry-standard PKI technologies.



ACTION

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

22 April 2004